

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-8 are pending in the present application.

In the outstanding Office Action, Claims 1-8 were rejected under 35 U.S.C. § 102(b) as anticipated by Hashimoto et al. (JP 02002232417A, hereinafter “Hashimoto”).

With regard to the rejection under 35 U.S.C. § 102(b), Applicants’ respectfully traverse the rejection.

Unlike a conventional way in which a task ID is stored in each cache line, for example (see specification, page 4, lines 14-23), the invention as claimed in independent Claims 1 and 5 includes the feature of “*each cache line* having a secret protection attribute holding section *for storing an actual encryption key*” (emphasis added). Therefore, there is an advantage that contents written into the cache memory by one program can be read by another program without encrypting it and writing it back to a main memory when a plurality of programs read from and write into shared memory region by sharing one encryption key. Moreover, “if the execution code or data does not exist in the cache memory or the actual encryption key is not identical with the prescribed key, the execution code or data is read out from an external memory device,” as recited in Claims 1 and 5 (the prescribed key being, for example, one used to decrypt an execution code or data).

Page 3 of the Office Action asserts that paragraphs 43-45 of Hashimoto discloses a cache memory, as recited in Claims 1 and 5. Paragraph 45 of Hashimoto describes that “the encryption key at the time of certain cache data is determined by the encryption attribute tag.” The above sentence cited in the Office Action, however, is an example of the descriptions in the Applicants’ specification, at page 5, lines 9-15, regarding conventional art. That portion in the specification states:

In the conventionally proposed tamper resistant microprocessor, the encryption key is obtained by using the task ID stored in the secret protection field in the cache line. For this reason, a key value table for storing correspondences between the task IDs and the encryption keys is provided inside the processor.

In other words, the encryption attribute tag stores a task ID and an encryption key corresponding to the task ID is determined by referring to the key value table. In Hashimoto, the encryption key is not stored in the cache memory but is, instead, stored in the key value table 804 in the lock management department 701 (see paragraph 127, and see paragraph 102 particularly regarding a data encryption key). Therefore, Hashimoto does not disclose “each cache line having a secret protection attribute holding section for storing an actual encryption key,” as recited in independent Claims 1 and 5.

Consequently, Hashimoto does not teach or suggest all of the elements in Claims 1 and 5. Therefore, Claims 1 and 5 are believed to patently define over Hashimoto.

Dependent Claims 2 and 6 are submitted to patentably define over the applied references by virtue of at least their dependency on Claims 1 and 5, respectively. Additionally, Claim 2 recites that “the cache memory control unit judges whether the actual encryption key stored in the secret protection attribute holding section of a cache line that stores the existent execution code or data is identical with the prescribed key stored in the key value register,” and Claim 6 recites that “whether the actual encryption key stored in the secret protection attribute holding section of a cache line that stores the existent execution code or data is identical with the prescribed key stored in the key value register is judged.” In contrast, in Hashimoto, the *identifiers* are compared (see paragraph 81). Accordingly, Claims 2 and 6 are believed to further patently define over Hashimoto.

Dependent Claims 3 and 7 are submitted to patentably define over the applied references by virtue of at least their dependency on Claims 1 and 5, respectively. Additionally, Claims 3 and 7 recite “storing the prescribed encryption key stored in the key

value register into the secret protection attribute holding section of a cache line for the data.” In contrast, in Hashimoto, an effective key *identifier* is written in the tag area (see paragraph 80). Accordingly, Claims 3 and 7 are believed to further patentably define over Hashimoto.

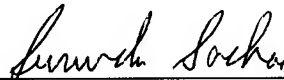
Dependent Claims 4 and 8 are submitted to patentably define over the applied references by virtue of at least their dependency on Claims 1 and 5, respectively. Additionally, Claim 4 recites that “the cache memory control unit encrypts a processing result of the data by using the actual encryption key stored in the secret protection attribute holding section of a cache line for the data,” and Claim 8 recites that “the data access control method further comprises encrypting a processing result of the data by using the actual encryption key stored in the secret protection attribute holding section of a cache line for the data.” In contrast, in Hashimoto, the data is not encrypted and returned by using a key stored in the cache memory (see paragraph 102). Accordingly, Claims 4 and 8 are believed to further patentably define over Hashimoto.

Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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